



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0274; Product Identifier 2019-NE-07-AD]

RIN 2120-AA64

Airworthiness Directives; International Aero Engines AG Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all International Aero Engines AG (IAE) V2525-D5 and V2528-D5 model turbofan engines. This proposed AD was prompted by reports of cracked turbine exhaust cases (TECs). This proposed AD would require initial and repetitive inspections of the affected TEC and, depending on the results of the inspections, its replacement with a part eligible for installation. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact International Aero Engines AG, 400 Main Street, East Hartford, CT, 06118; phone: 800-565-0140; email: help24@pw.utc.com; internet: <http://fleetcare.pw.utc.com>. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0274; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Martin Adler, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7157; fax: 781-238-7199; email: Martin.Adler@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-0274; Product Identifier 2019-NE-07-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

We learned of cracks along the rear mount stiffener rails on three IAE V2525-D5 and V2528-D5 model turbofan engine TECs that were found during routine inspections. After an investigation, IAE concluded that the cracks were due to corrosion pitting at a high-stress location. This condition, if not addressed, could result in failure of the TEC, engine separation, and loss of the airplane.

Related Service Information under 1 CFR part 51

We reviewed IAE Non-Modification Service Bulletin (NMSB) V2500-ENG-72-0694, Revision No. 2, dated July 2, 2018. The NMSB describes procedures for detecting any cracks that develop along the rear mount stiffener rail on the TEC. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require initial and repetitive inspections of the affected TEC and, depending on the results of the inspections, its replacement with a part eligible for installation.

Costs of Compliance

We estimate that this proposed AD affects 173 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect turbine exhaust case	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$44,115

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need this replacement:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replace turbine exhaust case	2 work-hours X \$85 per hour = \$170	\$725,000	\$725,170

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

International Aero Engines AG: Docket No. FAA-2019-0274; Product Identifier 2019-NE-07-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all International Aero Engines AG (IAE) V2525-D5 and V2528-D5 model turbofan engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine section.

(e) Unsafe Condition

This AD was prompted by reports of a cracked turbine exhaust case (TEC). We are issuing this AD to prevent failure of the TEC. The unsafe condition, if not addressed, could result in engine separation and loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) At the next engine shop visit, but not later than 4,000 flight cycles (FCs) after the effective date of this AD, perform an eddy current inspection (ECI) and high sensitivity fluorescent penetrant inspection (FPI) of the TEC front and rear mount stiffener rails for cracking indications as follows:

(i) Perform an ECI using the Accomplishment Instructions, Part I – For Engines Installed on Aircraft, paragraphs 2 through 19 inclusive, or Part II - For Engines Not Installed on Aircraft, paragraphs 2 through 18 inclusive, of IAE Non-Modification Service Bulletin (NMSB) V2500-ENG-72-0694, Revision No. 2, dated July 2, 2018 (“IAE NMSB V2500-ENG-72-0694”).

(ii) If a rejectable indication was found during the ECI, perform a local high sensitivity FPI to confirm a crack.

(iii) If a rejectable indication was found during the ECI, but no crack(s) were confirmed using the local high sensitivity FPI, then clean, blend and repeat the ECI in the local area of the part. Use the Accomplishment Instructions, Part I – For Engines Installed on Aircraft, paragraph 20.A.(3), or Part II - For Engines Not Installed on Aircraft, paragraph 19.A.(3), of IAE NMSB V2500-ENG-72-0694 to perform the cleaning and blending. Use the Accomplishment Instructions, Part I – For Engines Installed on Aircraft, paragraphs 2 through 19 inclusive, or Part II - For Engines Not Installed on Aircraft, paragraphs 2 through 18 inclusive, of IAE NMSB V2500-ENG-72-0694 to perform the repeat ECI.

(iv) If a rejectable indication was again found during the repeat ECI, then repeat the local high sensitivity FPI inspection in the local area of the part. If the local high sensitivity FPI does not confirm a crack, follow the instructions in the Accomplishment

Instructions, Part I – For Engines Installed on Aircraft, paragraph 20.A.(5)(a), or Part II - For Engines Not Installed on Aircraft, paragraph 19.A.(5)(a), of IAE NMSB V2500-ENG-72-0694.

(2) If no cracks were found, within 2,000 FCs since the last inspection, and thereafter, repeat the inspections of paragraphs (g)(1)(i) through (iv) of this AD.

(3) If a crack was confirmed during the FPI and visual inspection required by paragraphs (g)(1)(ii) or (iv), before further flight, remove the part from service and replace with a part eligible for installation.

(h) Credit for Previous Actions

You may take credit for the inspections required by paragraph (g)(1) of this AD if you performed these inspections before the effective date of this AD, using IAE NMSB V2500-ENG-72-0694, Revision No. 1, dated February 7, 2018; or IAE NMSB V2500-ENG-72-0694, Original Issue, dated January 5, 2018.

(i) No Reporting Requirement

No reporting requirement contained within the NMSB referenced in paragraph (g) of this AD is required by this AD.

(j) Definition

For the purpose of this AD, an “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine case flanges, except that the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(k) Special Flight Permit

A special flight permit is not permitted if the crack indication extends past the mount stiffener rail or if there is evidence of an FPI indication on the outer diameter of the case.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) Related Information

(1) For more information about this AD, contact Martin Adler, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7157; fax: 781-238-7199; email: Martin.Adler@faa.gov.

(2) For service information identified in this AD, contact International Aero Engines AG, 400 Main Street, East Hartford, CT, 06118; phone: 800-565-0140; email: help24@pw.utc.com; internet: <http://fleetcare.pw.utc.com>. You may view this referenced service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Issued in Burlington, Massachusetts, on May 13, 2019.

Robert J. Ganley,
Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.
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